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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573,999	03/30/2006	Claus Frohberg	65084.000018	9272
21967	7590	12/11/2008	EXAMINER	
HUNTON & WILLIAMS LLP			PAGE, BRENT T	
INTELLECTUAL PROPERTY DEPARTMENT			ART UNIT	PAPER NUMBER
1900 K STREET, N.W.				1638
SUITE 1200				
WASHINGTON, DC 20006-1109				
MAIL DATE		DELIVERY MODE		
12/11/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/573,999	FROHBERG, CLAUS	
	<b>Examiner</b>	<b>Art Unit</b>	
	BRENT PAGE	1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 10 September 2008.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,4-13,15-22,24,25,27 and 28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,4-13,15-22,24,25,27 and 28 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ .  | 6) <input type="checkbox"/> Other: _____ .                        |

**DETAILED ACTION**

The Reply filed 09/10/2008 is hereby acknowledged. The cancellation without prejudice of claims 2-3 and 14 is hereby acknowledged. The addition of new claims 27-28 is hereby acknowledged. Claims 1, 4-13, 15-22, 24-25 and 27-28 are pending and examined on the merits herein.

Any objections or rejections of record in the office action mailed out 06/10/2008 not addressed below are considered hereby withdrawn in response to Applicants arguments when taken together with the amendments filed with the Reply filed on 09/10/2008.

***Claim Objections***

Claims 1 and 13 are objected to because of the following informalities: The incorporation of essential material in the specification by reference to an unpublished U.S. application, foreign application or patent, or to a publication is improper. Applicant is required to amend the disclosure to include the material incorporated by reference, if the material is relied upon to overcome any objection, rejection, or other requirement imposed by the Office. The amendment must be accompanied by a statement executed by the applicant, or a practitioner representing the applicant, stating that the material being inserted is the material previously incorporated by reference and that the amendment contains no new matter. 37 CFR 1.57(f).

***Claim Rejections - 35 USC § 112***

Claims 1, 4-13, 15-22, 24-25 remain rejected and claims 27-28 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a genetically modified plant cell comprising SEQ ID NO:3 or nucleic acid encoding SEQ ID NO:4, does not reasonably provide enablement for any modified plant cell with an increase in activity of any Class 3 branching enzyme, wherein the modification is a nucleic acid sequence with as little as 80% identity to SEQ ID NO:3, or a nucleic acid that encodes an amino acid with as little as 80% identity to SEQ ID NO:4, or any nucleic acid that hybridizes to SEQ ID NO:3 under stringent conditions. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. The claims remain rejected for the reasons stated in the office action mailed out on 06/10/2008 as well as the reasons set forth below.

Applicant's arguments filed 09/10/2008 have been fully considered but they are not persuasive.

Applicants urge primarily that the claims have been amended to limit the claims to class 3 branching enzymes with two particular domains.

This is not persuasive because the amendment of the claims contains an improper incorporation by reference. The attempt to incorporate subject matter into this application by reference to pfam accession numbers is ineffective because the accession numbers rely on viewing a database. The database may

change over time as corrections and additions are made to these entries, and therefore a database may not be relied on for incorporation by reference. Incorporations by reference must contain a published document with a verifiable date in which the data relied on is not amended over time. See MPEP 608.01(p).

Further, Applicant is strongly urged to amend the claim to recite the claimed domain sequences using sequence identifiers that reference a sequence listing so that a complete search may be conducted.

Claims 1, 4-13, 15-22, 24-25 remain rejected and claims 27-28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims remain rejected for the reasons stated in the office action mailed out on 06/10/2008 as well as the reasons set forth below.

Applicant's arguments filed 09/10/2008 have been fully considered but they are not persuasive.

Applicants urge primarily that the claims have been amended to limit the claims to class 3 branching enzymes with two particular domains.

This is not persuasive because the amendment of the claims contains an improper incorporation by reference. The attempt to incorporate subject matter into this application by reference to pfam accession numbers is ineffective because the accession numbers rely on viewing a database. The database may

change over time as corrections and additions are made to these entries, and

therefore a database may not be relied on for incorporation by reference.

Incorporations by reference must contain a published document with a verifiable date in which the data relied on is not amended over time.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 4-13, 15-22, 24-25 and 27-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 13 both recite “enzyme has an iso-amylase domain (Pfam acc.: Pf02922) and an alpha-amylase domain (Pfam acc: Pf00128)”.

It is unclear whether the recited accessions in parentheses are intended to be claim limitations or merely examples. For the recited accession numbers to be considered as claim limitations, the parentheses must be removed. New Matter must be avoided.

It is also unclear what limitation is being incorporated by the accession numbers. In addition to being an improper incorporation by reference as discussed above, it also is unclear what sequences consist of the stated domains at the time of filing due to ability of the database to be changed over time. Therefore the metes and bounds of the limitation of the claim are unclear.

No claim is allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**.

See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRENT PAGE whose telephone number is (571)272-5914. The examiner can normally be reached on Monday-Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on (571)-272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Brent T Page

/Russell Kallis/

Primary Examiner, Art Unit 1638